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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,377	06/13/2006	Markus Raab	095309.57134US	2882

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EXAMINER
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LOUIE, WAE LENNY

ART UNIT	PAPER NUMBER
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3661

MAIL DATE	DELIVERY MODE
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10/14/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/559,377	<b>Applicant(s)</b> RAAB, MARKUS	
	<b>Examiner</b> WAE LOUIE	<b>Art Unit</b> 3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 24-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/06/2005</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 27-50 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 27-50 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: claims disclose the intended use of sensor of claims 24 and 25. There are number of intended uses including warning the driver, determining mass, determining center of gravity, use for parking or reversing but the claims fail to further limit structural limitations of the apparatus.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 24-26, 48-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over McMahon et al (7,005,974) in view of Piper et al (6,886,847).

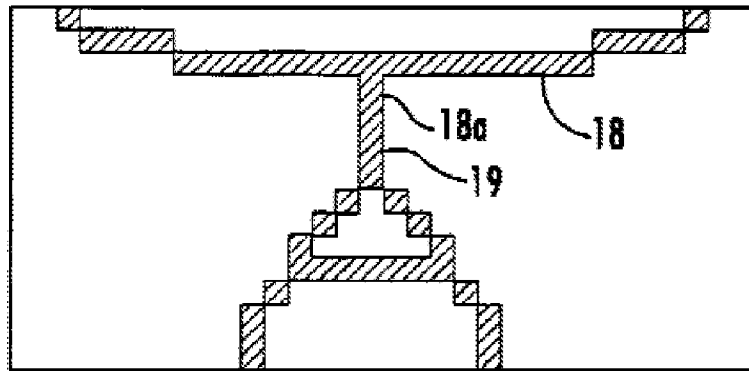
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Regarding applicant claims 24, 48-51, McMahon et al discloses an apparatus and method for determining a spatial alignment of a semi-trailer or trailer connected to a prime mover comprising:

**detecting contours of the semi-trailer or trailer in order to produce sensor signals which describe a spatial alignment of the semi-trailer or trailer relative to the prime mover** (abstract, "vehicle imaging system");

**an evaluation unit which uses the sensor signals to determine at least one angle variable which describes an angle between the prime mover and the semi-trailer or trailer, wherein the sensor signals include image information from at least one of a two-dimensional representation and an image of a linear sub-area of the detected contours of the semi-trailer or trailer** (Fig. 4B, col.1-col.2, "determining alignment of trailer hitch... flashing the lines or icons in the display or any other means for indicating the alignment to the driver").

But McMahon is silent concerning **determining the at least one angle variable on the basis of the image information by evaluating the rate of change of geometric characteristics of the at least one of the two-dimensional representation and the image of the linear sub-area of the detected contours of the semi-trailer or trailer.**



**FIG. 4B**

McMahon does disclose the image of the hitch alignment as shown in Fig. 4B but does not disclose the evaluating the rate of change of geometric characteristics of the image and detected contour of the semi-trailer or trailer. Piper et al utilizes acoustic transducers that aid in the alignment of the hitch. The transducers evaluate the rate of change of the geometric characteristics based on the reflection of ultrasonic sound. It would have been obvious to one of ordinary skill in the art at the time of invention to utilize any number of sensors like that of Piper to determine the angle of the trailer of McMahon since this is readily available in the art and a well-known technique.

Regarding applicant claim 25-26, McMahon and Piper discloses the alignment of the sensor as being adjusted both vertically and horizontally. It would have been obvious to one of ordinary skill in the art to accommodate for both horizontal and vertical angle components since they are well within the scope of both McMahon and Piper's invention of detecting the hitch alignment which encompasses both a vertical and horizontal component.

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Regarding applicant claims 49-50, recites an intended use of the signals but does not result in any structural change in the invention. Examiner does not put any patentable weight to these claims.

Claims 27-47 rejected under 35 U.S.C. 103(a) as being unpatentable over McMahon et al (7,005,974) in view of Piper et al (6,886,847) and further in view of Caci (6,154,658).

Regarding applicant claims 27-47, McMahon and Piper disclose the apparatus for determining the angle of an attached trailer or semi-trailer but is silent concerning determining the center of gravity height and mass of the trailer or semi-trailer. Caci discloses a vehicle information and safety control system that discloses a number of safety features including load and center of gravity (col. 2, lines 40-65). It would have been obvious to one of ordinary skill in the art to incorporate the features of Caci with the sensor of McMahon and Piper since these features provide the driver with a number of factors in determining the safety of the vehicle.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WAE LOUIE whose telephone number is (571)272-5195. The examiner can normally be reached on M-F 0700-1530.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Wae Louie/  
Examiner, Art Unit 3661

/Thomas G. Black/

Supervisory Patent Examiner, Art Unit 3661